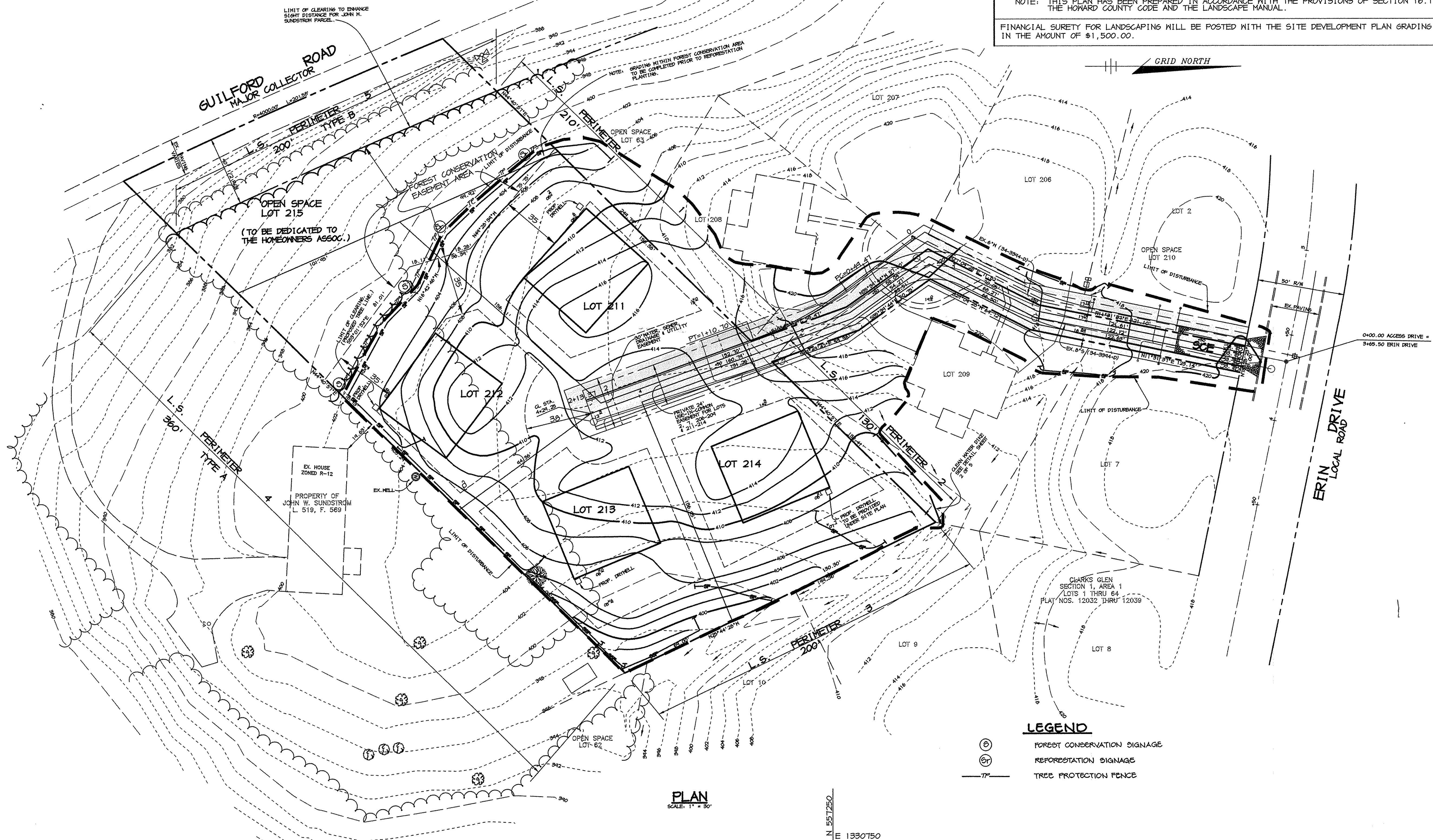


VICINITY MAP
SCALE: 1" = 2000'

N 557000
E 1330250

N 557250
E 1330250



PLAN
SCALE: 1" = 30'

N 557250
E 1330750

SCHEDULE A - PERIMETER LANDSCAPING

CATEGORY	ADJACENT TO PROPERTIES				ADJACENT TO ROADWAYS
	1*	2*	3*	4	
LANDSCAPE TYPE REQUIRED	N/A	N/A	N/A	A	B
LINEAR FEET	210'	130'	200'	360'	200'
CREDIT FOR EXISTING VEGETATION	N/A	N/A	N/A	**	**
CREDIT FOR WALL, FENCE OR BERM	-	-	-	-	-
CREDIT FOR EXISTING VEGETATION	-	-	-	-	-
NUMBER OF PLANTS REQUIRED (SITE)	-	-	-	-	-
SHADE TREES	N/A	N/A	N/A	6	4
EVERGREEN TREES	-	-	-	0	5
SHRUBS	-	-	-	0	0
NUMBER OF PLANTS PROVIDED (SITE)	-	-	-	-	-
SHADE TREES	N/A	N/A	N/A	**	**
EVERGREEN TREES	-	-	-	-	-
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-	-	-	-

NOTES: * THERE IS NO REQUIREMENT FOR EDGES, BUFFERING OR SCREENING BETWEEN INTERVAL LOTS OF THE SAME SUBDIVISION. DPZ LETTER DATED APRIL 22, 1997.
** DEFERRED UNTIL SDP.
NOTE: THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
FINANCIAL SURETY FOR LANDSCAPING WILL BE POSTED WITH THE SITE DEVELOPMENT PLAN GRADING PERMIT IN THE AMOUNT OF \$1,500.00.

SHEET INDEX

NO	DESCRIPTION
1	GRADING AND SEDIMENT CONTROL PLAN
2	DETAIL SHEET
3	DIMENSION AND PAVING PLAN
4	REFORESTATION PLAN
5	REFORESTATION NOTES AND DETAILS

BY THE DEVELOPER :
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Mohamed Elmaghrabi 6/15/98
DEVELOPER DATE

BY THE ENGINEER :
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Abdul M. Muegge 6/15/98
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Caryl Simmons 6/23/98
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Blanton 6/23/98
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Howard S. Shaffer 6/24/98
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Cindy H. Hatcher 7/6/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Arthur E. Muegge 6/15/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE NO. REVISION

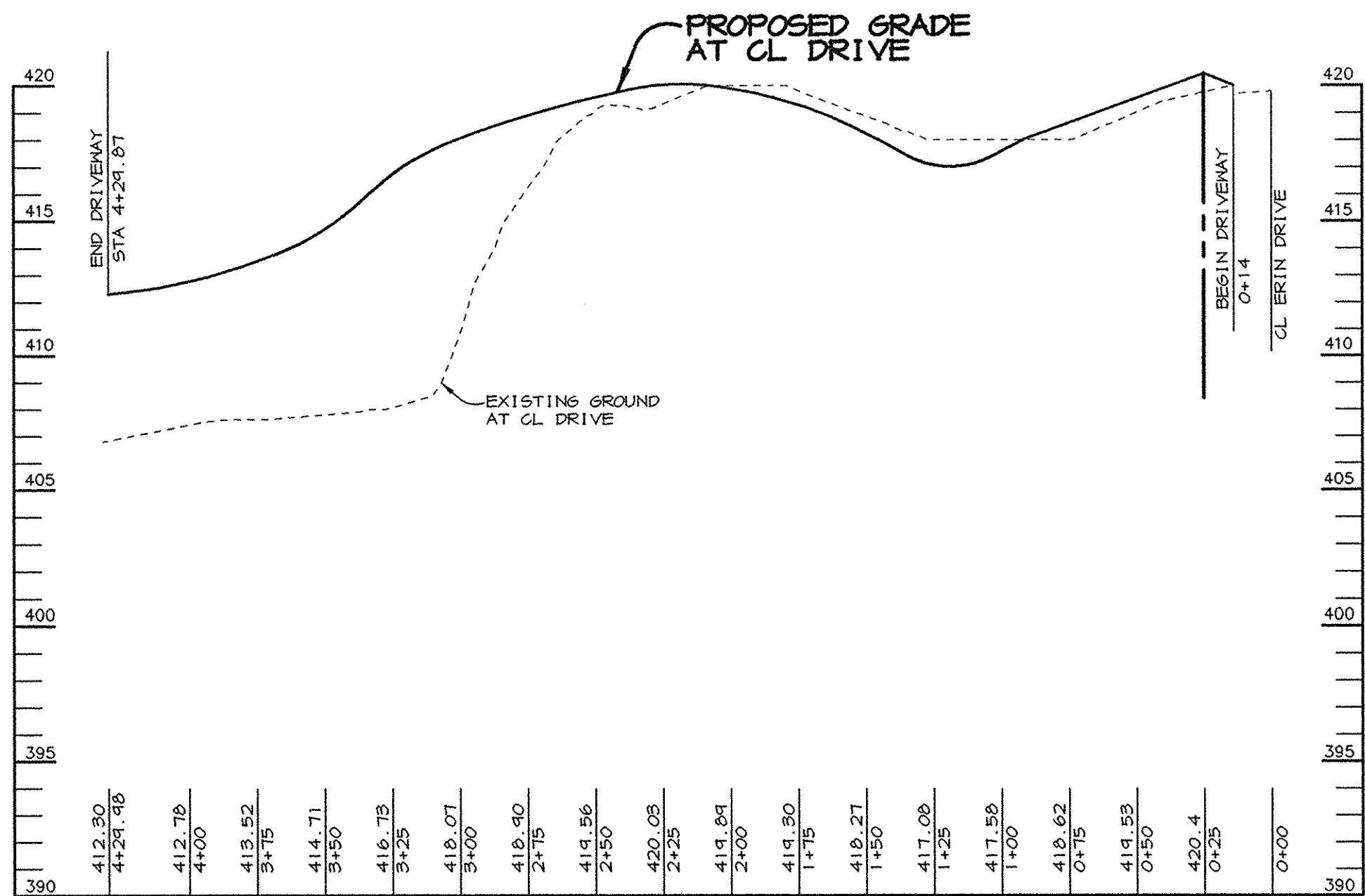
OWNER/DEVELOPER
MILBEN II LIMITED PARTNERSHIP
C/O JOHN E. BITTNER, V.P.
1501 S. EDGEMOOD STREET
SUITE K
BALTIMORE, MARYLAND 21227
(410) 644-5603

PROJECT
CLARKS GLEN
SECTION 4, LOTS 211 THRU 215
PRIVATE ROAD PLANS
AREA PARCEL 205 ZONED R-12
TAX MAP 34, BLOCK 18 TAX MAP 35, BLOCK 13
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
GRADING AND SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, Maryland 21045
tel 410.997.8900 fax 410.997.9282

DESIGNED BY : C.J.R.
DRAWN BY : DAM
PROJECT NO : 93213
RD1.DWG
DATE : JUNE 15, 1998
SCALE : AS SHOWN
DRAWING NO. 1 OF 5



SCALE :
HOR. - 1" = 50'
VERT. - 1" = 5'

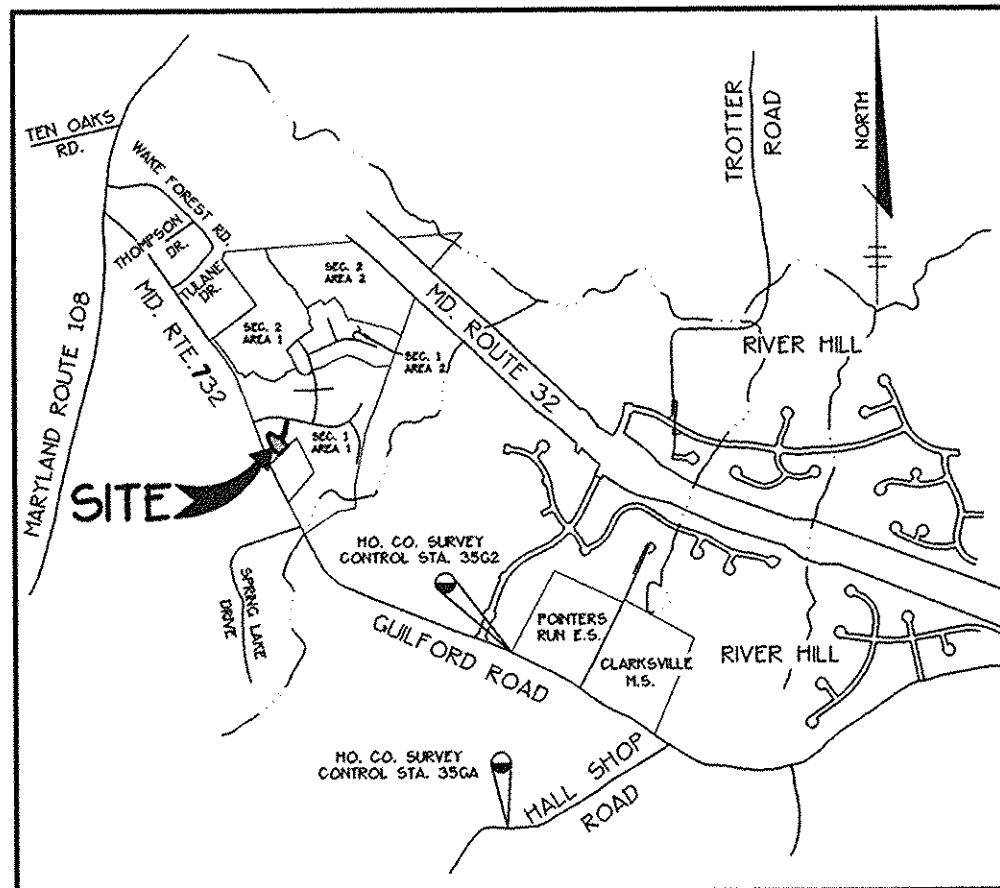
15-98
DATE _____

SEAL OF THE STATE OF MARYLAND
JAMES H. MUEGG
GOVERNOR
1800
REGISTERED MAIL
#8707

Arthur H. Muegg

ARTHUR H. MUEGG #8707

DESIGNED BY :	C.J.R.
DRAWN BY :	DAM
PROJECT NO.	93213 R03.DWG
DATE :	JUNE 15, 1998
SCALE :	AS SHOWN
DRAWING NO.	3 OF 5



VICINITY MAP
SCALE: 1" = 2000'

N 557000
E 1330250

N 557250
E 1330250

NOTES:

1. ALL UTILITY RIGHTS-OF-WAY SHALL BE REPLANTED UP TO THE LIMIT OF DISTURBANCE TO REPLACE FOREST CANOPY LOST DURING CONSTRUCTION.
2. SEE SHEET 9 FOR REFORESTATION NOTES, DETAILS AND PLANTING LISTS.
3. REFORESTATION PLANT INSTALLATIONS:
 - A. RANDOMLY SPACE NEW TREE & SHRUB INSTALLATIONS TO ALLOW NO MORE THAN (5) 1" CALIPER OR (7) 1/4" - 1/2" CAL. TREE WHIPS OR (4) SHRUBS OF ANY PARTICULAR SPECIES TO BE PLANTED IN SUCCESSION. USE SUGGESTED SPACING AS A GENERAL GUIDE. TAKE CARE NOT TO PLANT IN PERFECT ROWS OR GRIDS.
 - B. LANDSCAPE PLANT LOCATIONS TAKE PRECEDENCE OVER REFORESTATION PLANTINGS. REFORESTATION PLANT MATERIAL SHOULD BE USED TO INFILL AREAS AROUND THE LANDSCAPE PLANT MATERIAL.
 - C. "LOW LAND PLANT MIX IS TO BE USED WHEN INSTALLING PLANTS INSIDE THE STREAM BUFFER, SEE LEGEND. UPLAND PLANT MIX SHALL BE USED FOR ALL OTHER PLANTING WITHIN THE REFORESTATION AREAS.
4. OFF SITE REFORESTATION FEE:
 - A. THE REQUEST TO FULFILL FOREST CONSERVATION OBLIGATIONS FOR THIS SITE BY PAYMENT OF A FEE-IN-LIEU OF \$105.00 IS APPROVED.

GENERAL LEGEND:

- EXISTING TREE LINE
- PROPOSED TREE LINE
- 75' STREAM BUFFER
- TREES 30" DBH OR GREATER
- TREE PROTECTION FENCE
- FOREST CONSERVATION EASEMENT
- L.O.D.
- FOREST CONSERVATION SIGNAGE
- REFORESTATION SIGNAGE
- FOREST RETAINED WITHIN FOREST CONSERVATION EASEMENT
- EXISTING FOREST TO BE CLEARED
- REFORESTATION AREA (SEE REFORESTATION LEGEND)

- SLOPES:
- SLOPES GREATER THAN 25%
 - SLOPES 15% - 24.9%

REFORESTATION LEGEND:

- (SEE REFORESTATION NOTES AND DETAILS, DWS. NO. 2 OF 2 FOR PLANT LISTS)
- ON-SITE REFORESTATION WITHIN FOREST CONSERVATION EASEMENT UPLAND PLANTING AREAS
 - OFF-SITE REFORESTATION FEE IN LIEU (SEE NOTE 4)

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DATE NO. REVISION

OWNER/DEVELOPER
WILBEN II LIMITED PARTNERSHIP
C/O JOHN E. BITTNER, V.P.
1501 S. EDGEMOOD STREET
SUITE K
BALTIMORE, MARYLAND 21227
(410) 644-5603

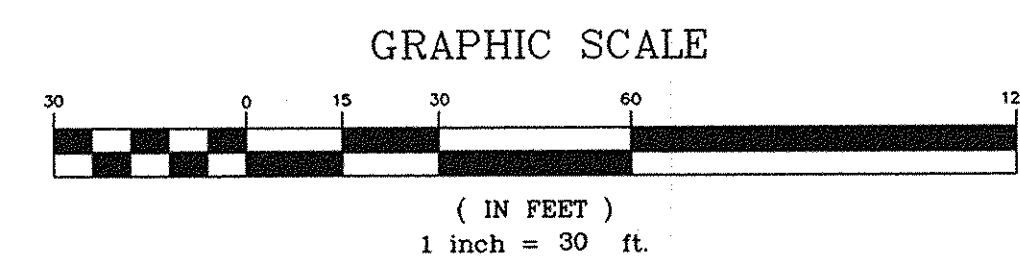
PROJECT
CLARKS GLEN
SECTION 4, LOTS 21 THRU 215
PRIVATE ROAD PLANS

AREA PARCEL 205 ZONED R-12
TAX MAP 34, BLOCK 18 TAX MAP 35, BLOCK 13
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
REFORESTATION PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, Maryland 21045
tel 410.997.8900 fax 410.997.9282

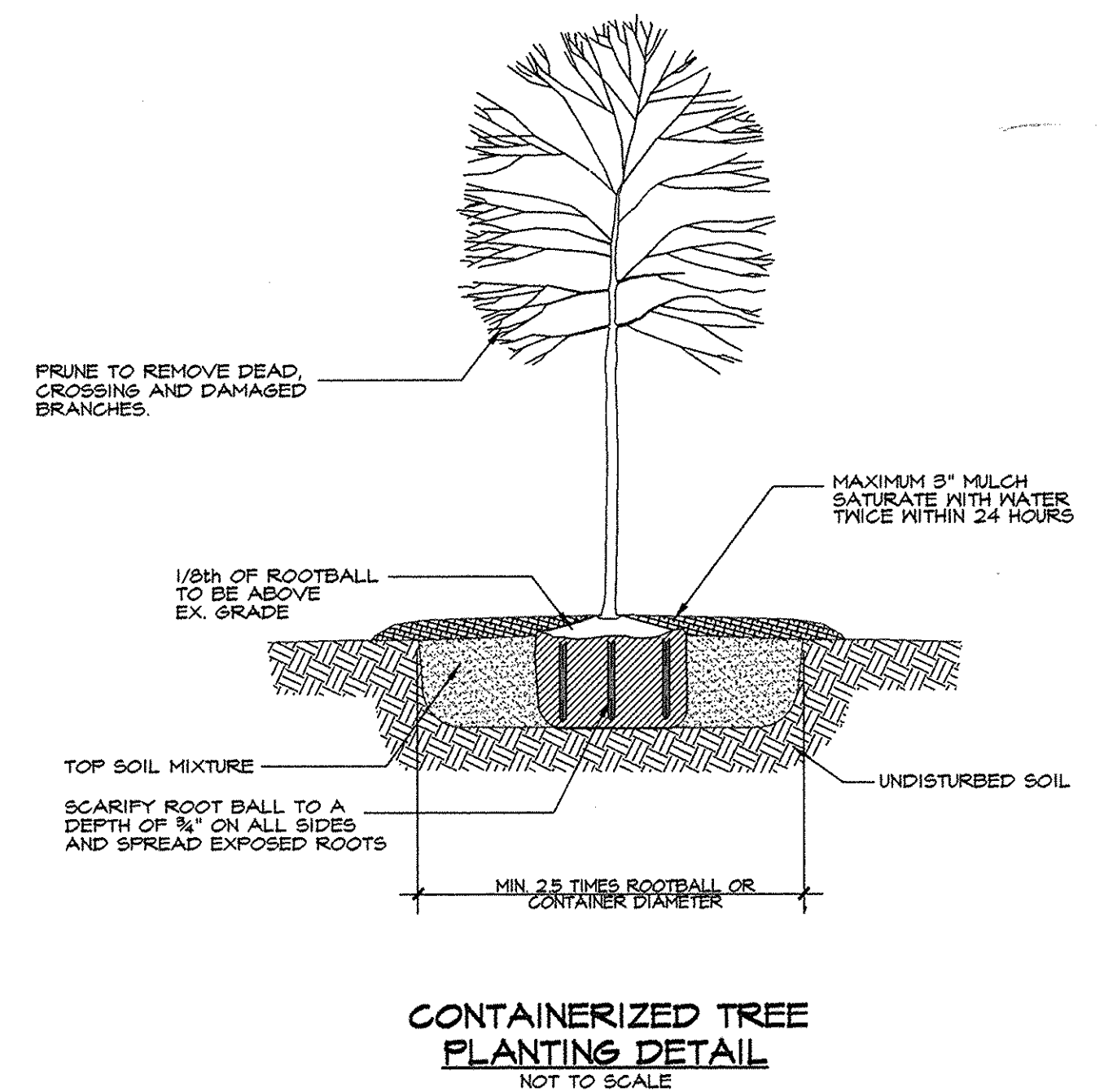
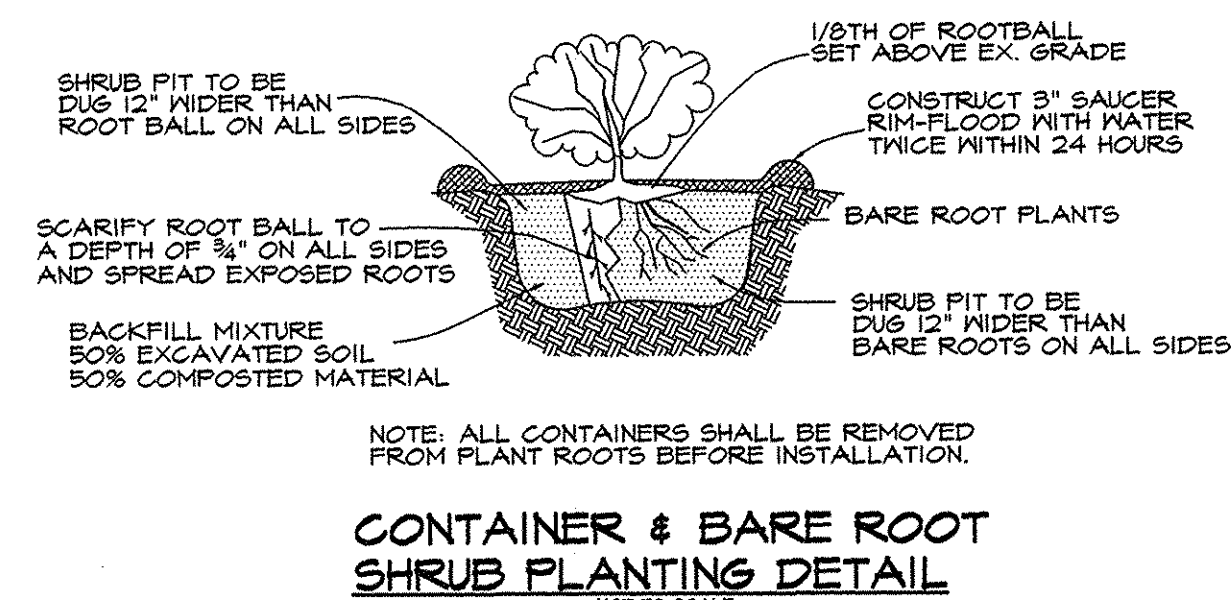
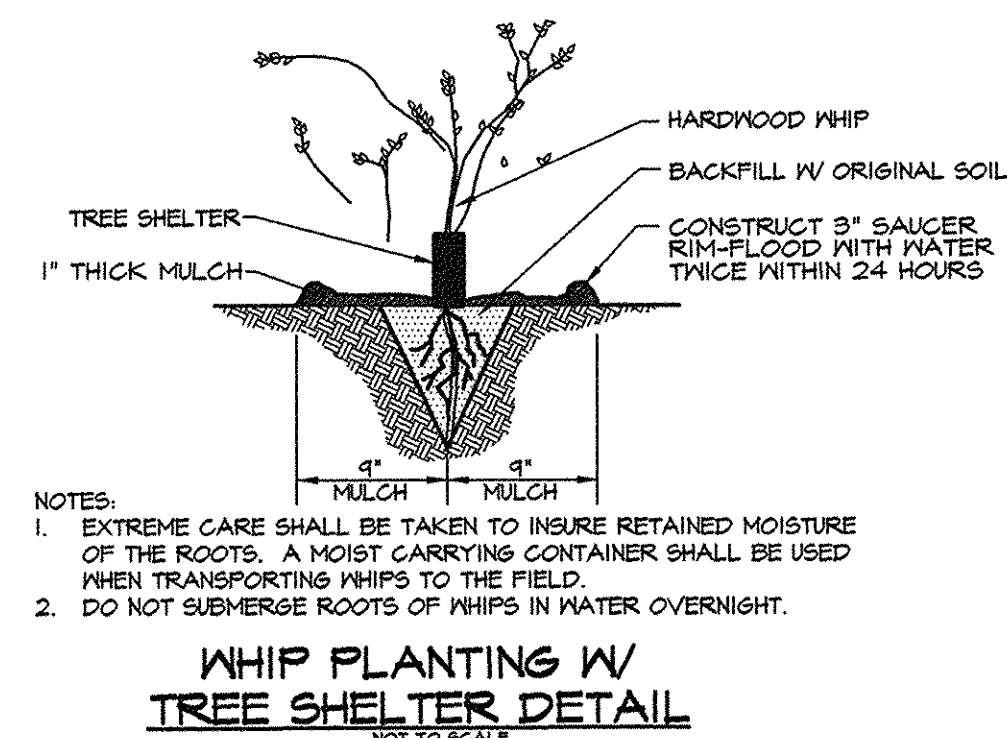
DESIGNED BY :
DRAWN BY : A.J.L.
PROJECT NO : 93213
DATE : JUNE 15, 1998
SCALE : 1" = 30'
DRAWING NO. 4 OF 5



THIS PLAN IS FOR LIMITS OF FOREST CONSERVATION & REFORESTATION. SEE SHEET 1 FOR FINAL GRADING.

REFORESTATION PLANTING LISTS

UPLAND PLANT LIST				
QUANTITIES	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
9	ACER RUBRUM / RED MAPLE	1/4" - 1/2" CAL.	WHIP	PLANT HT. MIN.: 3'-4', MIN. ROOT LENGTH: 8", PLANT 11' O.C.
10	QUERCUS ALBA / WHITE OAK			
12	FAGUS GRANDIFOLIA / AMERICAN BEECH			



SEQUENCE OF OPERATIONS

PRE-CONSTRUCTION
SITE PREPARATION

1. INSTALL TREE PROTECTION FENCE AND IMPLEMENT TREE PROTECTION METHODS AS SHOWN.
2. MOW OR BRUSH HOG THE SITE WITHIN THE LIMITS OF THE PROPOSED REFORESTATION AREA. DO NOT REMOVE OR DAMAGE ANY EXISTING TREES OR SAPLINGS UNLESS OTHERWISE INDICATED.

* THERE SHALL BE NO STAGING, STORAGE, OR STOCKPILING OF MATERIALS WITHIN THE NONTIDAL WETLANDS OR 25' NONTIDAL WETLANDS BUFFER.
3. REMOVE OR TREAT WITH AN ACCEPTABLE METHOD, NOXIOUS PLANT MATERIAL SUCH AS MULTIFLORA ROSE, TEARthumb, AND JOHNSON GRASS BEFORE INSTALLING REFORESTATION PLANTS.
4. INSTALL TREE PROTECTION SIGNAGE.
5. STABILIZE ANY DISTURBED AREAS USING THE SPECIFIED STABILIZATION MIXTURE WHICH ALLOWS FOR NATURAL REVEGETATION OF FOREST COMMUNITIES.

FOREST CONSERVATION SEQUENCE OF OPERATIONS

1. Prior to beginning any grading operations on this site or on a respective lot, there shall be a preconstruction meeting held at the site which is to include the Contractor and representatives from Riemer Muegge & Associates, Inc. (RMA), The Howard County Department of Planning and Zoning (DPZ) and the owner will be notified by the Contractor as to the location and extent of the grading, which will be used as representative. The purpose of this meeting will be to review the approved FGP and to field verify the correct Limits of Disturbance (LOD).
2. The Limits of Disturbance (LOD) pertinent to the preservation of wooded areas shall be staked in the field with final adjustments being made as necessary to insure adequate protection of the Critical Root Zone of trees designated for retention. Stakes to be used shall be those specified for the "TREE PROTECTION DEVICE" which approved protective material will be attached. Alternate means of defining the LOD may be used if approved by the DPZ.
3. All forest retention areas shall be protected by highly visible, nail anchored temporary protection devices (see detail), which shall be securely in place prior to any clearing or grading operations.
4. Grading operations or other construction operations which could dislodge or otherwise damage the protective devices shall be avoided along the edges of the LOD lines if possible. If the protective devices are damaged during site construction operations shall be properly repaired immediately by the Contractor.
5. After site grading, utility access road, and driveway construction have been completed, all trees adjacent to the LOD line shall be inspected for indications of crown die-back (summer dormancy), damage within respective critical root zones or any dead wood or other conditions which might be hazardous to pedestrians, buildings, utility lines vehicular access ways or parked vehicles.
6. Should there be evidence of any damage to tree trunks, branches or the critical root zone of trees within the protected areas, or to isolated specimen trees to be preserved, the damaged trees shall be removed in a period of two (2) days from the date of observation by a licensed tree care professional. Exposed roots shall be covered immediately to a depth of 6 - 8 inches with soil, preferably mixed with 50% peat moss or leaf mold.
7. Remove damaged, dead or dying trees or limbs only if the trees or limbs pose an immediate safety hazard to buildings, utility lines, vehicles, or access and egress drives or pedestrian areas. Trees designated for pruning or removal shall be pruned or removed using equipment and methods which will not damage or destroy adjacent large trees or understory trees or shrubs designated for retention.
8. All temporary forest protection devices will be carefully removed after all general construction, necessary tree surgery, removal of debris, etc. regrading and reseeding of exposed erosion control disturbance have been completed and acceptance and approval of the work and site conditions have been given by the DPZ.

AFFORESTATION/REFORESTATION PLANTING SEQUENCE OF OPERATIONS

1. The Contractor's shall inform the Howard County Department of Planning and Zoning (DPZ) when planting operations are to begin.
2. Determine storage areas for materials and equipment. Obtain approval of location from Owner and the DPZ.
3. Prior to beginning any planting, the soils within the area(s) designated for Afforestation or Reforestation shall be analyzed regarding the following features: nutrient content, organic matter, structure, pH and cation exchange capacity. Soils that have been actively farmed may contain herbicide residue or herbicide contamination. Such analysis may be performed by the local Soil Conservation Service or Agricultural Extension Service. A minimum of three random samples should be collected for the analysis. An assessment of soil moisture should also be made at the time. Corrective measures shall be made in accordance with analysis results and recommendations.
4. The Contractor, assisted by a Representative of Riemer Muegge & Associates, shall stake (or wire-fence) planting area limits and plant locations in accordance with the plan and details.
5. Provide and plant all trees of the species and sizes specified and in accordance with the details shown on the Forest Conservation Plan, unless otherwise directed by the DPZ.
6. At the completion of planting, remove all excess materials and miscellaneous debris from the respective area(s) of work.
7. Protection Devices - To prevent damage within planted areas, all reforestation and/or afforestation sites must be posted with appropriate signs and the area(s) delineated with appropriate protective fencing. No construction equipment nor storage of materials shall be permitted within the planted areas. Details are shown on the Forest Conservation Plan and shall remain in effect as shown. No pedestrian traffic shall be allowed within the protected areas.
8. Attachment of signs or any other objects to trees within the protected areas is prohibited.

PLANTING SPECIFICATIONS

AFFORESTATION OR REFORESTATION MAINTENANCE AND REPLACEMENT REQUIREMENTS

A two year (24) month maintenance and replacement warranty period is required for all newly planted materials. The maintenance and replacement warranty period shall commence upon the date of the written acceptance by the Owner of the planted areas. A written warranty will be delivered to the Owner upon acceptance of the planted areas. Maintenance and replacement shall be provided by the Contractor responsible for the initial planting operations and shall include all materials and labor. No maintenance or replacement credits shall be covered under this maintenance and replacement warranty period.

I. MAINTENANCE:

The Contractor shall field check the newly planted area(s) and shall provide the following maintenance items in accordance with the following schedule which shall begin after the completion and acceptance of the initial Afforestation or Reforestation planting.

II. MAINTENANCE ITEMS:

4. **Watering:** Watering of all newly planted materials once per week as weather permits during the entire initial growing season. Following the initial growing season, watering shall be done on an "as needed" basis depending on the frequency of natural rainfall. During the months of July and August and periods of severe drought, all newly planted materials shall be watered thoroughly once a week. Watering shall be done deeply and slowly using an open end hose or watering probe at low pressure, allowing the water to be absorbed into the soil until thoroughly saturated. The watered area shall include the whole root zone as the tree becomes more established.
5. **Fertilizing:** Fertilizing shall be applied only after the soil has been tested to determine its needs. Organic fertilizer should be applied in accordance with the amounts recommended in the soil analysis report. No fertilizing of newly planted trees shall be done within the first growing season after initial planting. Following the first growing season, apply fertilizer as recommended either in late fall or early spring.
6. **Supplemental Mulch:** To control undesirable vegetation adjacent to the newly planted materials and to prevent tree roots from drying out, additional mulch shall be placed over the root zone as needed and as required. Carefully remove any invasive plants (including the root system) within the mulch fields. Do not damage trees in any way during removal of invasive plants or remulching operations.
7. **Pruning:** Remove dead, diseased, dying and broken branches from all plant materials. Pruning shall be done cleanly leaving no ragged ends.

III. REPLACEMENT OF DEAD OR DYING MATERIALS:

1. Replacement: Any plant materials which are 25% dead or more shall be replaced during the appropriate spring or fall planting seasons in accordance with the methods indicated in the Planting Specifications. A tree shall be considered dead when the main leader has died back.
2. All replacements shall be plants of the same genus, species and size as specified on the plant list.
3. Contractor shall schedule an inspection of the Afforestation or Reforestation area(s) by a qualified representative of the DPE and by the qualified professional who prepared the plan, at the beginning and at the end of the growing season to observe any problems, monitor survival rate and specify necessary remedial actions needed to correct existing problems. The inspection should focus on the following items when determining survival potential:
 - (a) Vigor and threat of competing vegetation
 - (b) Plant structure
 - (c) Growth rate
 - (d) Crown development
 - (e) Trunk conditions and health

IV. PLANT CONDITION CHECK SHEETS

IV. PLANT CONDITION CHECK SHEETS

The Contractor shall maintain accurate records on appropriate field data check sheets which include a visual evaluation of the relative plant health and potential survival of the plant materials. Such check sheets shall be completed during each scheduled maintenance session during the 24 month management and maintenance program. One copy of the check sheets shall be sent to the Client, one copy to RMA, and one copy shall be sent to the Howard County Department of Planning and Zoning.

V. SURVIVAL REQUIREMENT.

V. SURVIVAL REQUIREMENT:
The survival rate for Afforestation and Reforestation areas shall be a minimum of seventy-five percent (75%) of the total number of trees required to be planted per acre under the approved plan.

VI. INSPECTION/CERTIFICATION SCHEDULE:

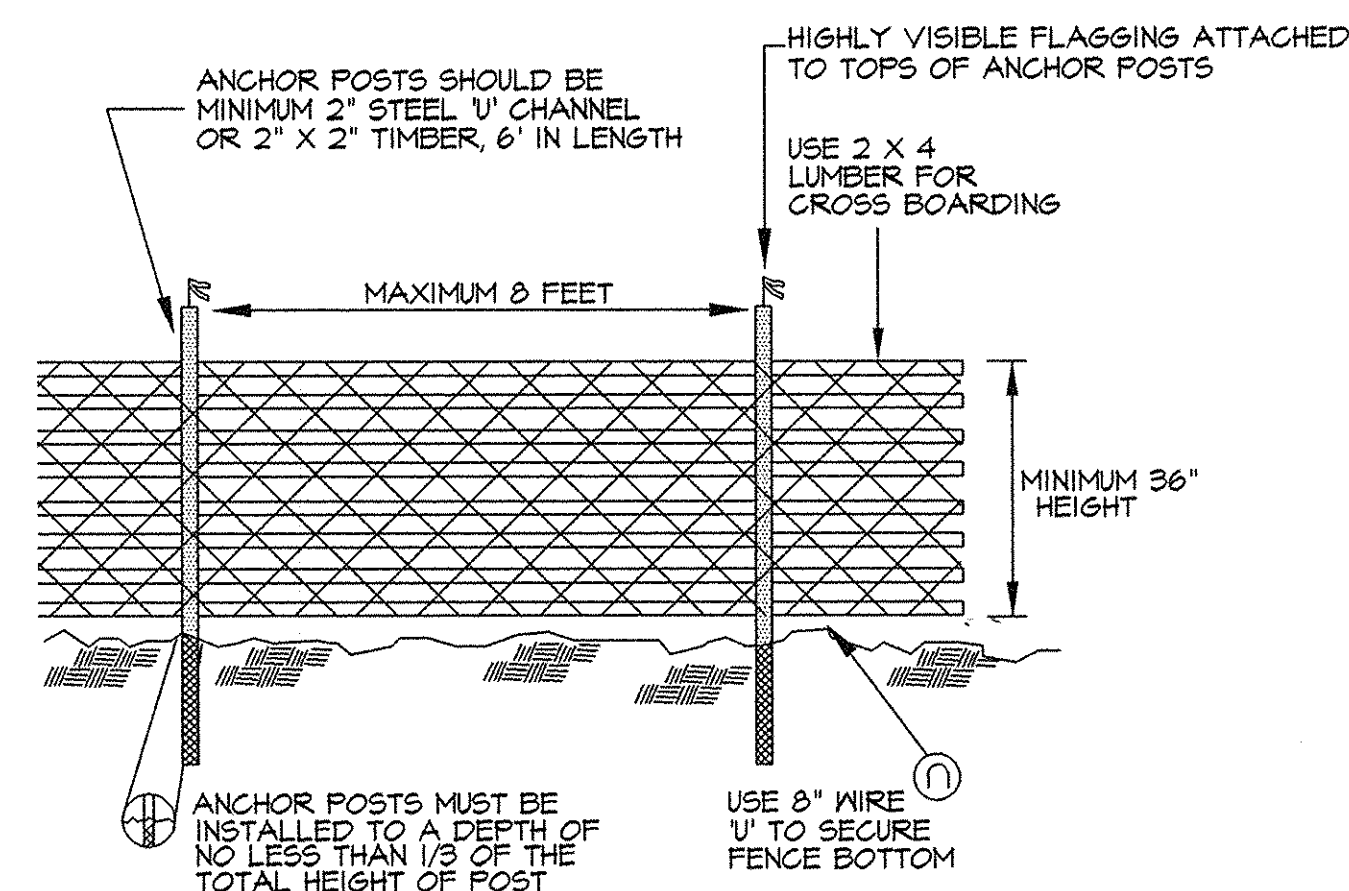
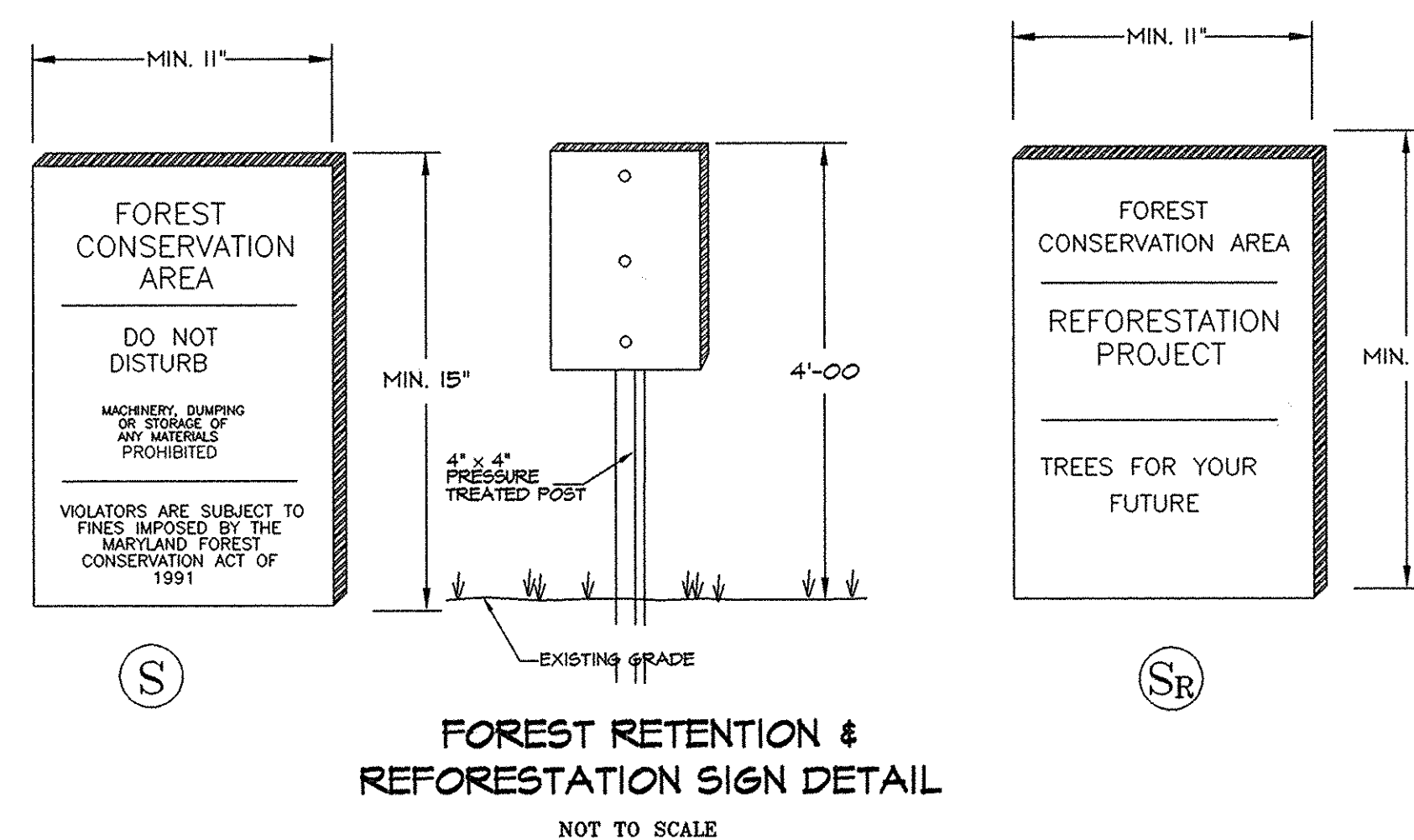
VI. INSPECTION/CERTIFICATION SCHEDULE:
The Contractor shall submit with his bid, a schedule for the work which shall include inspections by RMA at the conclusion of installation and at the start and conclusion of each growing season during the two-year warranty period.

VII. PENALTY FOR VIOLATION:

VII. **PENALTY FOR VIOLATION:**
 If a slip occurs during the Contractor and a representative of RMA shall take place at the end of the 24-month management and maintenance agreement period. The Contractor shall contact RMA at least one (1) month in advance of such inspection for coordination. If the survival rate of the Afforestation or Reforestation area(s) falls below the established survival requirements by the end of the 24-month management and maintenance agreement, the remaining amount of cash bond or other surety may be subject to forfeiture, or other penalties may be imposed.


PLANTING DETAILS

TREE PROTECTION SIGNAGE & FENCING



TREE PROTECTION FENCING

NOT TO SCALE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING WORKS.	
<i>Howard Smith</i> _____ CHIEF, BUREAU OF HIGHWAYS	<i>6/25/98</i> _____ DATE
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Cindy Haratta</i> _____ CHIEF, DIVISION OF LAND DEVELOPMENT	<i>7/6/98</i> _____ DATE
<i>[Signature]</i> _____ CHIEF, DEVELOPMENT ENGINEERING DIVISION	<i>6/30/98</i> _____ DATE
DATE	NO. REVISION
OWNER/DEVELOPER MILBEN II LIMITED PARTNERSHIP C/O JOHN E. BITTNER, V.P. 1501 S. EDGEMOOD STREET SUITE K BALTIMORE, MARYLAND 21227 (410) 644-5603	
PROJECT CLARKS GLEN SECTION 4, LOTS #1 THRU #15 PRIVATE ROAD PLANS	
AREA PARCEL 205 ZONED R-12 TAX MAP 34, BLOCK 18 TAX MAP 35, BLOCK 13 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE REFORESTATION NOTES AND DETAILS	
RIEMER MUEGGE & ASSOCIATES, INC. ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 8818 Centre Park Drive, Columbia, Maryland 21045 tel 410.997.8900 fax 410.997.9282	
<i>6.15.98</i>  <i>David T. Dows</i> DAVID T. DOWS #880	DESIGNED BY : D.T.D. DRAWN BY : A.J.L. PROJECT NO. 93213 REFORD DATE : JUNE 15, 1998 SCALE : 1"=30' DRAWING NO. 5 OF 5